

Municipality/Organization: Worcester State University

EPA NPDES Permit Number: MAR042022

MassDEP Transmittal Number: W-040406

Annual Report Number Year 14
& Reporting Period: April 1, 2016 – March 31, 2017

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2017)

Part I. General Information

Contact Person: Robert Daniels **Title:** Associate Director of Facilities

Telephone #: 508-929-8099 **Email:** rdaniels@worchester.edu

Mailing Address: 486 Chandler Street, Worcester, MA 01602

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: 

Printed Name: Kathleen M. Eichelroth

Title: V.P. - Administration and Finance

Date: 4/25/2017

Part II. Self-Assessment

Worcester State University (WSU) has completed a Self Assessment of the Storm Water Management Plan. WSU will update the SWMP in spring 2017, provided updated training in November 2016 and continues to meet the requirements of the permit.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
100.1 (2005)	Distribution of Educational Materials	Robert Daniels	Design a SW Management information page on campus web-site that will be accessible by all students, faculty, administrators and general public.	A university web page is under construction, the SWMP will be made available as soon as the web site is complete.	Complete web-page construction. Add latest version SWMP link to the web-page and web-page design improvements. Additional information about sustainability projects will be provided on the web site
Revised					
100.2 2006	Distribution of Educational Materials	Robert Daniels	Designed a pamphlet for contractors to explain the expectations WSU has for contractors working on-site	Continued to distribute pamphlet to contractors. The pamphlets are available in the facilities office	Continue to distribute pamphlet to contractors, will update as necessary to reflect with new MS4 permit information.

1a. Additions

100.3 2007	Distribution of Educational Materials	Robert Daniels	Download EPA's "After the Storm" pamphlet.	The pamphlets are available in the facilities office	No change
100.7 2012-2015	Distribution of Educational Materials	Robert Daniels	Annual Sustainability Fair –Planned for Fall organized by WSU Student Affairs and Career Services	Included SW as topic in WSU's annual sustainability fair.	No change

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
200 Revised	Storm Drain Stenciling	Robert Daniels	Re-stencil drains annually as needed	Re-stenciled drains by August 2014, included new storm drains near Admin Building, Also paint drains after cleanouts	Will re-stencil drains where necessary by Fall 2017
200.1 Revised	Campus Clean-up Day	Steve Bandarra	Annually in April-May	Biology and Facilities Departments cleaned campus on or around Earth Day 2017	Faculty, Student Government Association, Regional Environmental Council plan to clean neighborhood on or around Earth Day 2018. WSU EHS Department will also include electronics collection and paper shredding.
200.3 2007 Revised	Clean up of Moore Brook	WSU Grounds Crew and work study students	Clean brook annually as needed	Re-inspected and cleaned in Fall 2016	Re-inspect and clean by Fall 2017

2a. Additions

200.5 2012	Formed Neighborhood Advisory Council (NAC)	President's Office and Public Relations	Public involvement and information sharing	Formed Neighborhood Advisory Council to share information with local community (Civic Engagement Group), get involved in community and campus clean ups	On-going
200.6 2012	American College and University President's Climate Commitment	Steve Bandarra	Submitted Climate Action Plan	The Climate Action Plan referred to WSU's stormwater management plan, considered a member in good standing	Will update as necessary
200.8 2014	Princeton Review Guide to Green Colleges	Steve Bandarra	Be listed as Green Campus	Applied to get listed as Green Campus and was notified that WSU made the list	Will be published as a Green Campus in Spring 2018
2015	Live Learn Cohort-EcoHouse	Steve Bandarra	Students become more active in sustainability issues on campus	Students who want to live with common interest in sustainability and environmental issues	Group of students living together in Sheehan Hall-will be required to take sustainability seminar (e.g., solid waste, energy, toxics)

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
300.2	Dry Weather Inspections	Robert Daniels	Semiannual Inspections	Performed dry weather inspection in spring 2017	On-going inspections- WSU will plan on spring and fall inspections in all future years.
Revised					

3a. Additions

300.4	New SW Site Plans-as part of Campus Utilities Plans	Sandra Olson	New SW Site Plan	Subsurface utility plans updated by BSI in spring 2017	The BSI –Subsurface Utility Engineering plan will be updated to include any changes to the storm water system as the campus grows
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4. Construction Site Storm Water Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
400.1	Develop Construction Site Run Off Plan	Robert Daniels	Update Construction Run-off Program	Construction Run-off Program reviewed in Fall 2014, no changes necessary.	Update as necessary as result of renewal of MS4 permit.
Revised					
400.2	Construction Run-Off Plan Training	Robert Daniels	Implementation of periodic training	WSU provided training in November 2016	WSU will provide retraining in 2017
Revised					
400.3 2006	Develop an enforcement strategy when construction inspections and BMPs are not being implemented	Robert Daniels and Facilities Department	Document all Stop Work notices that are generated	There were no Stop Work orders issued.	If necessary, Stop Work orders will be issued.
Revised					

4a. Additions

400.4 2007	SW Review with Construction Site Personnel and MSCBA/DCAMM	Robert Daniels	Meet with construction company and MSCBA before and during construction projects	Continued to interact with construction companies and DCAMM/MSCBAs for utility relocation for construction projects.	Will continue to interact with construction companies and DCAMM/MSCBAs for all DCAMM/MSCBAs future projects that affect SW.
400.5 2007	Construction Site Inspections	Robert Daniels	Periodic construction site inspections	Weekly construction site inspections	Construction site inspections will be conducted for any new future projects that will impact SW

5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15
500	Develop a Post Construction Storm Water Management Plan as an appendix to Storm Water Management Plan	Robert Daniels	Update Post Construction SWM Plan	Currently updating SWMP in spring of 2017	Will update SWMP as necessary going forward
Revised					
500.1	Implement training for Post Construction SWM	Robert Daniels	Implementation of periodic training	WSU provided retraining in November 2016 -----	WSU will provide retraining in 2017 -----
Revised					
500.2 2006	Research alternatives to sand/road salt for road and walkway deicing.	Robert Daniels	Get prices and do a cost benefit analysis, reduction of sand and sediment in run off	Discontinued of Sand/ Salt, used environmentally friendly salt product instead.	Will continue the use of environmentally friendly salt product during future Winters
Revised					

5a. Additions

500.3 2007	Catch basin clean out	Robert Daniels	Clean catch basins	Cleaned out catch basins in summer of 2016. Vortechnic Units were inspected and those accessible were cleaned out in 2016	Will clean out catch basins and Vortechnic units by summer 2017.
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6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
600 2007	Develop a training program for Facility Personnel	Robert Daniels	Implementation of periodic training	WSU provided retraining in November 2016	WSU will provide retraining in 2017 -----
Revised					
600.1 2009	Snow Management	Robert Daniels	Less snow melt into Lake Ellie	WSU continues to work at improving snow removal management by relocating to less environmentally sensitive areas on campus	Continue the best management practices.
Revised					

6a. Additions

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) <<if applicable>>

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
	NA			NA	NA
Revised					

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

Part V. Program Outputs & Accomplishments (OPTIONAL)

(Since beginning of permit coverage unless specified otherwise by a **, which indicates response is for period covering April 1, 2014 through March 31, 2015)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	
Annual program budget/expenditures **	(\$)	
Total program expenditures since beginning of permit coverage	(\$)	
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	
Stormwater management committee established	(y/n)	
Stream teams established or supported	(# or y/n)	
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	
Shoreline cleaned since beginning of permit coverage	(mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	
▪ community participation **	(# or %)	
▪ material collected **	(tons or gal)	
School curricula implemented	(y/n)	

Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
Regulatory Mechanism Status (indicate with "X")					
▪ Illicit Discharge Detection & Elimination					
▪ Erosion & Sediment Control					
▪ Post-Development Stormwater Management					
Accompanying Regulation Status (indicate with "X")					
▪ Illicit Discharge Detection & Elimination					
▪ Erosion & Sediment Control					
▪ Post-Development Stormwater Management					

Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	
Estimated or actual number of outfalls	(#)	
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	
Outfalls inspected/screened **	(# or %)	
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	
Illicit discharges identified **	(#)	
Illicit discharges identified (Since beginning of permit coverage)	(#)	
Illicit connections removed **	(#); and (est. gpd)	
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	
% of population on sewer	(%)	
% of population on septic systems	(%)	

Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	
Site inspections completed **	(# or %)	
Tickets/Stop work orders issued **	(# or %)	
Fines collected **	(# and \$)	
Complaints/concerns received from public **	(#)	

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	
Site inspections (for proper BMP installation & operation) completed **	(# or %)	
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	
Low-impact development (LID) practices permitted and encouraged	(y/n)	

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	
Qty of structures cleaned **	(#)	
Qty. of storm drain cleaned **	(%, LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	
• Disposal cost**	(\$)	
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	
• Vacuum truck(s) owned/leased	(#)	
• Vacuum trucks specified in contracts	(y/n)	
• % Structures cleaned with clam shells **	(%)	
• % Structures cleaned with vector **	(%)	

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	
• Disposal cost**	(\$)	
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	
• Vacuum street sweepers owned/leased	(#)	
• Vacuum street sweepers specified in contracts	(y/n)	
• % Roads swept with rotary brush sweepers **	%	
• % Roads swept with vacuum sweepers **	%	

Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	

▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	
Integrated Pest Management (IPM) Practices Implemented	(y/n)	

	(Preferred Units)	Response
Average Ratio of Anti-/De-Icing products used ** (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand	
Pre-wetting techniques utilized **	(y/n or %)	
Manual control spreaders used **	(y/n or %)	
Zero-velocity spreaders used **	(y/n or %)	
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/l _n mi. or %)	
Estimated net reduction or increase in typical year sand application rate **	(±lbs/l _n mi. or %)	
% of salt/chemical pile(s) covered in storage shed(s)	(%)	
Storage shed(s) in design or under construction	(y/n or #)	
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	

Water Supply Protection

Storm water outfalls to public water supplies eliminated or relocated	# or y/n	
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	
• Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n	

